Portfolios & Collective Investment

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Antonio Candelieri

Portfolio

- ***Portfolio***: a collection of one or more securities owned by an investor or an investment company
- ***Positions***: elements of a portfolio
- ***Value of a portfolio*** (at any given time): the sum of the values of its positions at that point in time
- ***Profit of a portfolio*** (at any give time): is the sum of the profits given by its positions at that time

Portfolio management

- Any portfolio is designed, and updated, to fit investment objectives and investor's expected rewards, in continuous confrontation with his tolerance to risk

- The management of a portfolio involves two basic operations:
  - *opening* new positions (i.e., adding positions) with better expected reward,
  - *closing* positions. To *close out* a position can mean to sell it in the market, or to add to the portfolio the inverse of the position so that its future value performance does not affect the future value of the portfolio*

- **Asset allocation**: the dynamics of opening and closing out positions with the aim to minimize risk and maximize profits

** For example, a forward contract to buy an asset for a certain delivery price and given maturity, can be close out by another forward contract to sell the same asset (and same amount of it) for the same delivery price and maturity*

Mutual Funds and ETF

- Instead to personally manage your own portfolio, you can put your money in a **collective investment vehicle** managed by a professional company
- This company select the securities, monitors their performance, and perform asset allocation for you (and the other “collective investors”)
- **Mutual Funds** are the most common type of these collective investment instruments
  - regulated and registered in the exchange market,
  - publicly available,
  - either closed-end (the number of shares in the portfolio is fixed) or
  - open-end (no restrictions on the amount of shares that can be issued, and hence investors can enter the fund anytime, or exit by selling their shares back)

Mutual Funds and ETF

- Another type of collective investment instruments are the **Exchange-Traded Fund** (ETF):
  - like a closed-end fund with the added feature that it is traded in the stock exchange (investors can buy or sell shares of an ETF)

- There are many ETFs build with the purpose of **tracking a specific index** (i.e., a portfolio of stocks that replicates the index's price behavior), so this is a way for an investor to trade on the index.

Trading Positions

- **Long and short positions**
  - An investor who owns a security is *long* in that security
  - An investor who owes the value of a security is *short* in that security
  - An investor who *buys/sells* a security is assuming a *long/short* position on it
- Some examples:
  - The buyer of a call option is long on the option (the writer is short)
  - The buyer of a stock opens a long position on the stock…
  - …but selling a stock one owns does not mean to become short on that stock! (it just means closing the long position)

Trading Positions

- To have a short position on a stock one has to borrow shares of the stock from some broker and sells them in the exchange market
- Then, at a later time, one buys the shares back to return them to the lender
- There will be profit if by the time one has to return the shares the price is less than it was at the time the shares were borrowed and sold in the market
- This operation is known as ***short selling***, and is highly regulated and sometimes banned by governments because it is believed to contribute to the downfall of market prices

How to profit from a long/short position

- General rule:

Being long in any security implies to have a profit if the price increases, and a lost if the price decreases; whereas being short carries a profit if the price of the security decreases, and a lost if it increases

Trading attitudes

- Three types of traders:
  - **Hedgers** - trade so as to reduce or eliminate the risk in taking a position on a security (hedging strategy)
  - **Speculators** - take risk on purpose by betting on future movements of the security’s price
  - **Arbitrageurs** - take advantage of a price difference between two or more markets

Hedgers

- trade so as to reduce or eliminate the risk in taking a position on a security
- main goal: to protect the portfolio from losing value at the expense of lowering the possible benefits
- A **hedging strategy** usually involves taking contrarian positions in two or more securities
  - *For example, taking a long position on a stock and a short position on another stock with inverse price behavior. The easiest, and for most investors realistically possible, hedging strategy is to buy an Inverse ETF on the market index or industry where their portfolios have taken most of their positions. Thus, a fall (respectively, rise) on the value of the portfolio is compensated by a proportional rise (fall) of the Inverse ETF*

Speculators

- take risk on purpose by betting on future movements of the security's price

- For example, a speculator buys a stock under the conviction that its price will rise

Arbitrageurs

- traders that take advantage of a price difference between two or more markets

- they look for an imbalance in the pricing of a security in two different markets, and buy it at the cheap price in one market to immediately sell it at the higher price in the other market, making a profit on the difference (i.e. ***arbitrage***)
  - *For example, suppose that the exchange rates of EUR/USD in Frankfurt quotes at \$1.25, while in New York it quotes at \$1.3 at some instant of time; hence, the euro is undervalued in Frankfurt and overvalued in New York. An arbitrageur would exploit this imbalance by exchanging dollars for euros in Frankfurt and immediately exchange the euros for dollars in New York.*

About arbitrage

- In real life, there are transaction costs that would probably reduce considerably the profit, but moreover, it is natural to believe that this opportunity to profit from the different valuations on the exchange rates EUR/USD would come to the attention of more than one investor, and once a few of these alerted investors act upon this chance of easy profiting, the exchange rates EUR/USD will equal at both sides of the Atlantic, and hence terminating the arbitrage opportunity

- In fact, by the same argument that there will always be investors ready to act upon this or any other arbitrage opportunities, and that by doing so the chance of profiting from it will be immediately diluted, we must admit that the possibility of arbitrage is in practice non existent, as common belief holds

- This assumption of the impossibility of arbitrage opportunities (or no arbitrage) is the basis for many arguments for valuing derivatives

Bulls & Bears

- When the market trend is upward, as reflected by an index or the majority of its composite stocks, it is said to be ***bullish***, or that the bulls are in charge

- On the contrary if the market trend is downward then it is ***bearish*** or the bears have taken over

- Thus, *bulls* are those investors that take long positions in stocks whose prices are in uptrend, while *bears* are investors that go short in stocks whose prices are in downtrend

A first trading principle…

- *“When the market is bullish you should assume long positions; and when bearish you should assume short positions”*

- …or in doubt, go both long and short, which is a form of hedging

Is the market bullish or bearish?

- Determining if the market is bullish or bearish, which boils down to determining the expected slope of the trend and its sustainability in time, involves loads of subjective judgement

- Here is what the Vanguard group thinks a signal of bearish market should be:

  While there's no agreed-upon definition of a bear market, one generally accepted measure is a price decline of 20% or more over at least a two-month period

Market timing or buy-and-hold

- A **passive attitude** is usually followed by the majority of investors, consisting on buying various securities and maintaining them in the portfolio for a long time (i.e. **buy-and-hold**)

- The basic motivation is the observed tendency of almost all securities to increase their value if sufficient time is given to them to mature

- On the other hand, while waiting patiently for his investments to reach the desired rate of benefits, an investor will surely observe how the price roller-coasters through time, and may wonder if returns would be greater (and obtained quicker) by selling at the peaks and re-buying at the troughs

- There are many empirical reports sustaining the increase in benefits of applying this timely sequence of entries and exits in the shareholding of stocks; provided, of course, that the times of trading are rightly chosen…

Timing strategies

- Various methods exist for devising *market timing strategies*, which include using models for forecasting returns, analysis of structural properties of prices and of the business economic fundamentals, and others

- Whatever the market timing trading strategy, one should expect that at least it should beat the results obtained by doing no intermediate trade between the first buy and the final sell → The general accepted test is to compare results of a timing strategy with the buy-and-hold strategy